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William F. Caton
Federal Communications Commission
Washington, DC 20554

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RE: Report of Ex Parte Communications
Docket No. 87-268

March 6, 1997

Dear Mr. Caton:

This is a copy of a document sent to Ms. Marsha MacBride, Legal Advisor for Commissioner James Quello. The document is related to the ongoing DTV proceeding

If you have any questions on this matter, please communicate with the undersigned.

Jeremy Lansman
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**ECONOMIC IMPACT OF CHANGE FROM VHF TO UHF
FOR KYES-(TV), ANCHORAGE, ALASKA**

Costs of depreciation over a 20 year period, straight line, monthly

Impact of transition to UHF from VHF, Transmitter plant

Fireweed ran a coverage study showing coverage loss using a station of 312 kW DTV ERP. While that power is modest, even such a low power cannot be supported by such a station as KYES, a small market UPN affiliate.

Below we show estimates of cash required for conversion to DTV, using existing VHF transmitter, a higher power UHF (10 kW average DTV) UHF transmitter, and an interim low power UHF transmitter.

* = equipment on hand, not included in total cost.¹

Item	Present VHF plant	High Power UHF plant	Low Power UHF plant
Transmitter	\$23,000*	\$450,000	30,000 *
8VSB exciter	\$30,000	\$30,000	30,000
Antenna	\$25,000*	\$150,000	3,000 *
Tube	\$5,000*	\$30,000	2,500 *
Electrical	\$2,500*	\$12,000	400
1-3 phase pwr ² .	N/a*	\$10,000	N/A
Total Rqd	\$30,000	\$682,000	\$30,400

Total Cost Low power interim plan: \$30,400 (One DTV exciter can be swapped UHF to VHF)

Total Cost High Power UHF plan: \$682,000

At KYES, a small station in a small market, borrowing would be a major cost of, if not an insurmountable barrier to, acquisition and operation of a 10 kW (average) UHF DTV transmitter. Assuming a 10% loan to be repaid in 5 years, payments on a \$682,000 DTV loan will be \$14,490 per month. Thus:

Loan payments, monthly	\$14,490
New depreciation and operation cost	<u>7,397</u>
Total new monthly cost	\$21,887

¹ Costs were compiled on March 3, 1997 using information gleaned from various vendors. Since DTV equipment is not yet generally available, we were given conflicting information about electrical consumption. The values used were those from Harris.

² Transmitters need three phase power. The present transmitter site has single phase power only, requiring a single to three phase power converter. The converter was included in the transmitter cost for VHF, but is an extra cost for UHF.

To put this into context requires knowledge of costs and profits at KYES. I can say that in our best year, the last year, new costs as shown above would exceed income. Many small market stations such as our that might convert to DTV on their present channel will not be able to afford a change to a new, high power UHF channel. Instead they will be tempted to provide a low power signal serving the most urban portion of their present coverage. The cost of a new higher power DTV transmitter plant will necessarily be subtracted from funds any conscientious broadcaster might otherwise devote to public service broadcasts.

**Estimated costs of depreciation over a 20 year period, straight line, monthly,
Or cost of operation where applicable.**

Item	Present VHF plant	New UHF plant
Rent	\$500	\$1,000 ³
Transmitter	\$96 ⁴	\$1,875 ⁵
Antenna	\$104 ⁶	\$625 ⁷
Tube	\$104 ⁸	\$833 ⁹
Electricity	\$1,300	\$2,954 ¹⁰
1-3 phase conv.		\$42 ¹¹
Monthly	\$2,104	\$7,397
Annual total	\$25,248	\$88,548

³ Assume twice the space is required for a UHF transmitter, and that rent doubles.

⁴ Total estimated transmitter equipment (including shipping) cost \$23,000 depreciated over 20 years cost \$1,150 per year.

⁵ 40 kW IOT transmitter cost approx. \$450,000, 20 year depreciation is \$22,500 per year.

⁶ Present antenna system mostly home made, cost about \$25,000, not including time and sweat.

⁷ The antenna cost estimate is \$130,000 plus \$5,000 shipping and \$15,000 for installation and feed line. If the antenna gain is 33 and has the same horizontal plane directional pattern, then the vertical dimension will be about the same as the present antenna. It would require a 9 1/2 kW average input, or a 40 kW IOT transmitter.

⁸ Present cost of 8088 is about \$5,000. The tube lasts at least 48 months. In fact, KYES has never needed to purchase a new final amplifier tube, and has operated on used tubes. Actual cost, therefore, is less than shown.

⁹ 40 kW IOT lasts about 2-3 years, cost about \$30,000. Assume 36 months.

¹⁰ Present power load is 22 kW after conversion from single to three phase electrical power. The site has no three phase power. We have assumed the UHF-DTV transmitter consumes only 50 kW. Conversion to three phase power will add extra expense.

¹¹ Present Kay Electric Phasemaster is covered under Transmitter above. New one for UHF cost \$8,500 plus estimated \$1,500 shipping with 20 year life.